

Chapter 4 – Environmental Consequences

I. Environmental Consequences Related to Natural Resource Concerns

Alternative A: Core Restoration

Resident Wildlife

All Resident wildlife population numbers would undergo change under the core restoration. Reclamation of croplands to wetland and tallgrass prairie habitats would result in significant change in species composition and numbers. Year-round resident bird species would increase slightly. Greater prairie chickens are expected to increase substantially in the restored grassland habitats. Prairie chickens are a native species of interest to many people and currently limited in the region.

Winter resident song birds such as black-capped chickadees and common redpolls will also find additional feeding and resting areas.

White-tailed deer numbers would remain stable or increase throughout suitable habitats in the study area. The proposed refuge would be managed as an open prairie and wetland complex with little new woodland cover and fewer cropland acres. Deer densities will be more dependent on the severity of winter weather and snow depth. Prairie and wetland restoration will create new deer feeding and resting habitat; especially along the edge of riparian willow brush and open tallgrass prairies. However, deer populations would be controlled through hunting and winter mortality within the proposed refuge.



The fate of the regional moose population is a matter of speculation at this time. There are currently unknown problems affecting moose reproduction in northwestern Minnesota (USFWS 2000). However, habitat conditions, especially shallow wetlands and riparian woody cover, would favor their use of the study area should populations recover.

Crop depredations from deer, moose, raccoons and other species would remain at current levels or increase slightly in some locations. The acreage of croplands will be gradually reduced on the former Tilden Farms (now TNC) property. Croplands adjacent to refuge land could incur some localized depredation. However, natural food and cover on restored refuge lands would provide additional food sources for deer and other wildlife on a year-round basis.

Resident mammal populations, especially furbearers, will increase with the new extensive wetland habitats. Raccoon, mink, otter, beaver and muskrats would especially benefit. Higher numbers of small mammals such as mice and voles will provide an im-

proved food source for hawks, owls and other predators. Coyote, red fox, and long-tailed weasel numbers would increase along with the small mammal populations found in the grasslands.

Migratory Birds

Restored wetlands and adjacent uplands within the Glacial Ridge area would provide nesting, feeding and brood rearing habitat for waterfowl. Puddle ducks, such as mallards, blue-winged teal and northern shoveler, would nest in suitable grassland areas. Diving ducks such as canvasback, redhead, ringneck, along with several species of grebe, coots, and numerous other shorebirds would use the wetlands as nesting habitats. A number of the wetlands may also be suitable for trumpeter swan nesting. Habitats for wading birds and grassland-dependent songbird species would increase considerably under this alternative. Species that would benefit include many listed as Resource Conservation Priorities by Region 3 of the U.S. Fish and Wildlife Service including American bittern, least bittern, black tern, upland sandpiper, sedge wren, northern harrier, field sparrow, grasshopper sparrow, bobolink, and short-eared owl.

Migrating waterfowl including Canada geese and sandhill cranes would use the area in greater numbers during spring and fall, in relation to the weather, food availability and water conditions. Crop depredations from sandhill cranes and Canada geese could increase on adjacent lands that remain in row crop production. Currently much of the adjacent land is enrolled in the CRP program and are planted to natural cover. Some depredation could occur on newly-planted fields if they are returned to production in the future.

Implementation of Alternative A could lead to the restoration of over 8,000 acres of wetland habitat. The Service's Habitat and Population Evaluation Team in Fergus Falls has estimated that these restored basins, along with the associated grasslands, would likely support 5,000 pairs of nesting dabbling ducks (Table 2). No estimates for diving duck pairs are available.

Fish

Restoration of the headwaters portions of Burnham, Badger/Maple Creek and the Gentilly River would increase the area of available habitat for native fish species now using the existing downstream habitats. Wetland basin restorations will also, in some instances, provide nursery areas for resident fish species. A restored, natural water regime will reduce water level fluctuation within the creeks and provide more reliable fish habitats.

Biological Diversity

The restoration of marsh, riparian and tallgrass prairie habitats will greatly expand the diversity and number's of plant, bird, and insect species than currently use the study area. A number of insect species of special concern would likely find expanded habitat opportunities under all the action alternatives thereby providing greater security for their continued existence. Native prairie grasses, such as big and little bluestem, side oats gramma and Indian grass, along with 40 to 50 forb species, would be planted in suitable areas and harvested as a local-origin seed source.

Twenty-five species of mammals are known to occupy habitats of the tallgrass prairie. Of these, the free-roaming bison, the Great Plains wolf, swift fox, pronghorn antelope and grizzly bear are no longer found in Minnesota. Black bear and elk can still be found,

Table 2: Estimated Number of Breeding Pairs of Dabbling Ducks Upon Full Restoration of Wetlands

Species	Alternative A	Alternative C
Mallard	2,401	3,111
Blue-winged Teal	2,112	2,834
Gadwall	183	223
Pintail	96	129
Northern Shoveler	229	292
Total Pairs	5,021	6,589

Source: USFWS, Habitat and Population Evaluation Team, Fergus Falls, Minnesota

however, they no longer generally occupy their prairie niche. The gray wolf (*Canis lupus*) has filled the niche vacated by the Great Plains wolf in the Aspen Parklands north of the proposed Glacial Ridge refuge, but on a limited basis. Some woodland species occur within the project area due to woodland habitat types bordering the tallgrass prairie area. Once the habitat restoration portions of the project are completed a review could be undertaken to determine if large native species, such as bison and elk, that would not occupy the site on their own could be reintroduced into the project area.

Habitats for reptiles and amphibians will be increased. Reptiles, amphibians and insects play a pivotal role in the prairie ecosystem. At least 15 species of snakes, frogs, salamanders and turtles are found in the Minnesota portions of the northern tallgrass prairie (Hoberg, Pers. Comm.). The precise number of insect species which live in, breed in, or visit the tallgrass prairie is unknown but is estimated in the thousands. In the average prairie there are more species of invertebrates than of plants and vertebrate animals combined.

Threatened and Endangered Species

The restored wetland/prairie complex will provide habitat for expansion of the resident population of the threatened Western Prairie Fringed Orchid. In addition, the new prairies would provide habitat for 20 or more grassland-dependent songbird species.

Wetland Function

Alternative A could result in the eventual restoration of at least 8,000 acres of wetlands and wet prairie. Where possible the original meanders of the creek systems would be re-established along with its natural hydrologic function. Flood storage capacity of all the drained basins would increase and provide for a more gradual flow into the Sandhill and Red Lake Rivers. Sediments carried into the river systems would also be greatly decreased with the restoration of native grasslands within the study area.

Restorations identified within this document are generally basins larger than 2 acres in size as identified from hydric soil maps (areas where wetlands once occurred). Wetland basins extending off of the project area would not be restored to their complete extent without the participation of the co-owner(s) of the basins.

Alternative B: No Action (Status Quo)

Resident Wildlife

Resident wildlife populations would continue natural trends under this alternative and respond to the land management activities of the current owners. Some of the former Tilden Farms property will see wetland and grassland restorations during the next 10 years under a joint program sponsored by TNC, Natural Resource Conservation Service, Fish and Wildlife Service, Ducks Unlimited and others. These new habitats will benefit resident birds and mammals.

Conservation Reserve Program (CRP) acres may grow slightly under the no action alternative. However, few permanent habitats for prairie chickens and other grassland birds would result from CRP or other term set-aside programs as lands are converted, enrolled and then put back into production on a rotating basis.

White-tailed deer would remain abundant throughout suitable habitats in the study area. Moose would have less cropland available but up to 8,000 acres of shallow wetlands, a natural summer food source. Crop depredations from deer, moose, raccoons and other species would likely decrease slightly depending on the timing of restorations on the former Tilden Farms and future land uses and hunting pressure.

Migratory Birds

Migrating waterfowl would continue to use the area during spring and fall in relation to existing crop and water conditions. Nesting waterfowl pairs would increase if new small wetland basins are restored under existing programs. About 7,500 acres will be enrolled in the Wetlands Reserve Program by TNC. Restoration work could begin in 2001.

Increases in CRP or Wetland Reserve Program enrollments will provide additional habitats. The resident (Giant) Canada geese will continue to use the area based on food availability and nearby open water. Crop depredations from sandhill cranes and Canada geese would likely remain at current levels. Habitats for wading birds and grassland-dependent songbird species would be limited to the existing or new grasslands, riparian corridors and small wetland areas.

Fish

No stream habitat improvement projects would result beyond Core Restoration area under the No Action alternative. Planned wetland basin restorations described earlier would provide some fish habitat. In general, the fishery would remain stable or improve slightly based on farming land use activities, ditch maintenance activities and rainfall.

Biological Diversity

Some new plant, bird or mammal species will move into the Core Restoration area as the result of TNC land conversion. However, broadscale increases in diversity will require substantial changes in existing land uses. A few species may pioneer the area as a part of a natural range expansion. Rare plant species, primarily in existing prairie fragment areas on the edges of the study area may lose habitat to gravel quarries. A slight increase in overall biological diversity would be expected under the No Action alternative over time.

Threatened and Endangered Species

The majority of the existing Western Prairie Fringed Orchid populations are found on TNC lands and will be protected. However, future land uses such as gravel mining and herbicide applications on private lands within the peripheral study area may impact a few orchid sites.

Wetland Function

Possibly 4,000-8,000 acres of marsh or wet prairies would be restored in the Core area as the result of Wetland Reserve Program. A few small wetland basins elsewhere could be restored under existing Partnership programs or through private efforts. Drainage and row crop farming within most of the study area would continue depending on the future agricultural economy. The ability of the area to retain flood waters would increase or remain at the current level. Portions of the current drainage ditch system would need to be maintained to facilitate flow off neighboring agricultural lands. The possibility of large basin wetland restorations would be reduced by the No Action alternative.

Alternative C: Restoration Enhancement (Preferred Alternative)

Resident Wildlife

Habitat benefits for resident wildlife will be similar to Alternative A with the added value of 4,000 more acres of restorable wetlands. Some additional areas within Alternative C are grazed native tallgrass prairies. These existing habitats could easily be enhanced through active management and offer greater security for grassland nesting birds such as prairie chickens and other wildlife.



Migratory Birds

Alternative C would result in the protection of more existing deepwater wetlands. These lakes and ponds would supplement the habitat needs of diving waterfowl species such as canvasbacks. The increase restoration of wetland habitats and upland nesting areas would encourage a higher number of grassland and wetland nesting species including mallard, shoveler, blue-winged teal, Wilsons snipe, yellow and Sora rail, bobolink, meadowlark (both eastern and western), and Savannah, Grasshopper, LeConte's, Sharp-tailed, Vesper and Clay-Colored sparrows.

Fish

The additional protection of headwaters and downstream portions of three creek systems within Alternative C will ensure higher water quality for fish and their invertebrate food source in the restored riparian and wetland systems. Water level fluctuations within the creek systems will also be reduced.

Biological Diversity

Overall diversity would be similar to Alternative A. Larger restored grassland blocks and wetland basins may supply habitat or support genetic viability for a few additional plant and animal species.

Table 3: Summary of Possible Natural Resource-related Environmental Consequences

	Alternative A	Alternative B	Alternative C
<i>Resident Wildlife</i>	Significant increase in resident mammals and prairie chicken populations. Crop depredation could increase slightly.	Stable to increasing. Planned TNC restorations will increase wildlife habitat. Crop depredations at current levels.	Increase over Alt. A. Up to 4,500 more wetland acres. Possible slight increase in crop depredation.
<i>Migratory Birds</i>	Increased. New wetland habitat for migrating and nesting ducks, geese and cranes. Increase in grassland bird habitat.	Stable to increased. Use will depend on condition of wetlands and nesting habitats.	Increase over Alt. A. More edge/riparian species due to increases in wetlands. Marked increase in waterfowl and grassland birds.
<i>Fish</i>	Increased. Restored wetlands and riparian habitats will increase fish habitats.	Stable to increased. Land use changes (retirement) would improve water quality.	Increased over Alt. A. Up to 4,500 more wetland acres will bring additional quality riparian habitats.
<i>Biological Diversity</i>	Increased. Wetland and prairie restorations will greatly increase array of plants, birds, reptiles and invertebrates.	Similar to Alt. A. Fewer restored acres under private efforts.	Increased over Alt. A. Larger wetlands would provide more wet prairies and fens.
<i>Wetland Function</i>	Increased. Restoration of up to 8,112 acres of wetlands. Enhanced flood control and water quality. Adjacent prairie restoration would enhance wetland values.	Increased. Restorations under Wetland Reserve Program (7,500 acres) scheduled	Increased over Alt. A. Possible restoration of 12,765 acres of wetlands.
<i>Threatened and Endangered Species</i>	Increased. New or protected existing habitats for the threatened Western Prairie Fringed Orchid.	Increased. TNC will protect populations on their newly acquired lands.	Increased over Alt. A.

Threatened and Endangered Species

The addition of grassland habitats to the northwest and southwest will substantially increase the restoration and protection potential for the threatened Western Prairie Fringed Orchid.

Wetland Function

Similar to Alternative A except the expanded Restoration Enhancement area could result in an additional 4,000 acres of restored wetlands. Some the large wetland basins on the southern portion of the study area would be more than 4 miles long without a road crossing. The increase in restored wetland acres will also enhance the value of each beach ridge basin area; especially to retain snow and rain events.

II. Environmental Consequences Related to The Socioeconomic Environment

This section examines potential effects on tax revenue and the local economy that may result from the acquisition, operation and maintenance of a national wildlife refuge in the study area. Each of the alternatives, except no action, includes land acquisition and the need for future refuge administration. For this reason, we address all alternatives together within this section. Alternative B, No Action implies, with a few noted exceptions, that the local economy and taxes will follow current trends.

During the public scoping for this refuge proposal, a few people, including a local county official, expressed concern over the possible impacts of refuge establishment on local tax revenues. They also mentioned the impact on local gravel mining operations; specifically a loss in gravel taxes and availability of gravel for the local townships. In their opinion, the Service policy of making revenue sharing payments in lieu of taxes was not enough to offset the current tax income.

Taxes

The Nature Conservancy (TNC) purchased a major portion (24,000 acres) of the refuge study area in August 2000. TNC has announced their intent to create an endowment fund to cover taxes on these acquired lands in perpetuity. The fund would remain in existence even if a refuge were established and included former TNC lands.

TNC also plans to sell the former Tilden Farms grain cleaning facility to a private party. The new owners of this facility would continue to pay taxes. Long-term gravel leases have been negotiated with the current operators. Tax revenue from existing gravel removal operations should continue for many years.

The Service has reviewed current gravel mining operations in the study area. We have determined it would not be a priority to purchase active gravel operations unless all gravel rights could also be acquired at the same time. Also, any active gravel pits sought for acquisition should not be a sole source of gravel in the area.

The Service will make Revenue Sharing Payments (payments in lieu of taxes) at 0.75 percent of the **appraised** land value; not the value assessed by local governments. In

general, the amount of tax revenue generated from Glacial Ridge lands under public ownership will be about the same as “homesteaded” taxes or about half of “non-homesteaded” taxes. The actual amount levied each year varies according to the needs of local taxing jurisdictions and the property tax classification of each parcel. For example, the taxes levied on certain “homesteaded” property in Minnesota are about 0.75 percent of value, while on similar “non homesteaded” property it may be as much as 2.0 percent of value. A significant portion of the former Tilden Farms ownership was taxed at the non-homestead level.

Land acquisition under both action alternatives would likely occur over 20 years or more. The extent of fee ownership by the Service is difficult to predict as it depends on the landowners desire to sell land and whether buildings are included. It is also difficult to predict future tax assessments over such a long term. However, under Alternative A, the combination of Refuge Revenue Sharing, TNC Endowment and the state school tax reimbursement programs for public lands should provide a tax revenue package equal to current revenue.

Alternative C could result in a small shortfall in tax revenue if all non-TNC lands within the proposed boundary were acquired in a short period of time. This quick, total acquisition scenario is very unlikely based on our experience with similar refuge projects within the Midwest. The rough shortfall estimate of \$25,000 to \$32,000 represents 0.30% (.003) of the \$10 million Polk County property tax levy for 1999. In addition, the conversion of existing agricultural lands to native wetlands and prairie will require little or no new local government services. For example, the tax burden for road construction or repair will be reduced by the presence of a wildlife refuge and could likely eliminate any future tax shortfall.

The Local Economy

The local economy can experience some changes during the formation of a new national wildlife refuge. In general, the proposed Glacial Ridge Refuge would likely create increased spending in the area by visitors to the refuge, reduced agricultural production comparable to the Conservation Reserve Program, and increased expenditures by the Service to build and maintain refuge facilities. In addition, the new refuge could ultimately require an administrative facility and staff. Comparable refuge operations elsewhere in Minnesota have an annual station budget of more than \$700,000.



*A gravel mining operation within the study area.
(Photo by Rick Julian, USFWS)*

The refuge would likely be developed over the course of twenty years or more. During that time, funds would be needed for engineering and construction of facilities. Several hundred thousand dollars will be expended returning the lands to a native prairie complex of wetland and grasslands. This money will be expended locally for items such as native grass seed, fuel and contracts with heavy equipment operators for wetland restorations.

The Service estimates that federal purchases of land or conservation easements in the area under the preferred Alternative C could amount to more than \$7 million during the next 20 years. Economists generally view land transactions as having a neutral effect in a local economy. They suggest that proceeds of a land sale generally go back into real estate. However, it is reasonable to assume that some portion of the land acquisition dollars will be used by sellers to construct new homes, purchase new vehicles, etc.

In summary, the proposed Glacial Ridge National Wildlife Refuge would likely have a small *net* effect on county-level economic activity and could generate considerable social benefits. The value of natural areas, such as wildlife refuges, to people and their quality of life is difficult to measure in conventional economic terms. National Wildlife Refuges enhance the regional, state and the nation's stock of natural assets and provide important, but less tangible, benefits to its citizens, including clean water, natural beauty and abundant wildlife, fish and plants. Nevertheless, the Service recognizes that potential changes in the local and regional economy are important considerations.

III. Environmental Consequences Related to Local Land Use including Land Acquisition, Cultural Resources, Refuge Management and Administration

This section examines potential effects on landowners and local residents that may result from the acquisition, operation and maintenance of a national wildlife refuge in the study area. Each of the alternatives, except no action, includes land acquisition and the need for future refuge administration. For this reason, we address all alternatives together within this section. More detail can be found on these topics in Appendix A, the Interim Comprehensive Conservation Plan (ICCP). The ICCP provides general guidelines for the future management and administration of the proposed refuge.

Landowner Rights Adjacent to Refuge Lands

If a refuge is established, the Service has no more authority over private land within or adjacent to the boundaries of the refuge than another other landowner. Landowners within a project boundary retain all of the rights, privileges, and responsibilities of private land ownership. The presence of refuge lands does not afford the Service **any** authority to impose restrictions on any private lands. Control of access, land use practices, water management practices, hunting, fishing, and any other general use is limited to those lands in which the Service has acquired an appropriate real estate interest or rights.

Owning land adjacent to Service land does not change any of the regulations that currently apply and does not impose any new regulations on the land. Regulations pertaining to pesticides, drainage, pollution, hunting, fishing, trapping, etc., on private land are managed and enforced by other local, state or Federal agencies. The Service abides by these regulations the same as any other landowner. In addition, land managed by the Service will be posted in order to avoid trespass on private land by refuge visitors.

Service Land Acquisition Policies

Service policy is to buy land only from willing sellers. Service policy is that there would be no rights of landowners or citizens transferred without the willing participation of the individual(s) owning land or rights to the land, including appropriate just-compensation for those rights. The Service is required to make purchase offers based on fair market value; matching the price of comparable land in the same area.

It is also Service policy to seek the least amount of land ownership necessary to meet resource protection goals. Alternatives A would include primarily land acquisition. Alternative C includes voluntary land protection, stewardship and other private conservation measures as options for landowners. Fee acquisition is only one part of the preferred alternative for the proposed Glacial Ridge Refuge. If a landowner chooses to sell land or enter into a conservation easement with the Service, and funding is available, the Refuge Manager and/or a Realty Specialist will fully explain the procedure and time frames.

Revenue Sharing Payments

The Refuge Revenue Sharing Act of June 15, 1935, as amended, provides for annual payments to counties or the lowest unit of government that collects and distributes taxes based on acreage and value of National Wildlife Refuge lands located within the county. The funding for these payments comes from two sources: (1) net receipts from the sale of products from National Wildlife Refuge System lands (oil and gas leases, timber sales, grazing fees, etc.) and (2) annual Congressional appropriations.

Originally, counties received 25 percent of net revenues from the sale of various products or privileges from refuge lands located within the county. The result was that many counties received no payments as no revenue was generated from local refuge lands. The Refuge Revenue Sharing Act was amended in 1964 to provide for a payment of the greater of 25 percent of net receipts, \$0.75 per acre or 3/4 of 1 percent of the adjusted purchase price for all purchased land. In the state of Minnesota, 3/4 of 1 percent of the appraised value always brings the greatest return to the taxing bodies (townships and counties).

The Refuge Revenue Sharing Act was again amended in 1978 by Public Law 95-469. Important changes are: (1) Congress is authorized to appropriate funds to make up any shortfall in the revenue sharing fund; (2) all lands administered solely or primarily by the FWS (not just refuges) qualify for revenue sharing; and (3) payments to units of local government can be used for any governmental purpose.

The amount of a revenue sharing payment is directly tied to the **appraised** market value of a property. In some cases, annual payments to local governments exceed what the local tax, based on assessed value, would have been if the land was still in private ownership. In other cases, revenue sharing payments, and supplemental Congressional appropriations, fall short of the local assessed property tax revenue. Some members of Congress have recognized this fact and have taken steps to remedy the situation. H.R. 701, the Conservation and Reinvestment Act (CARA), and a companion Senate bill, were introduced in March 1999. These bills contained a provision for full funding of the Refuge Revenue Sharing Act. The proposed source of funds would be federal offshore oil and gas

lease revenues. However, despite passage in the House of Representatives, CARA did not get scheduled for a vote in the U.S. Senate during 2000 and the bill will need to be reintroduced in the 107th Congress.

Relocation Policies

The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act) provides for certain relocation benefits to home owners, businesses, and farm operators who are displaced as a result of Federal acquisition. The law provides for benefits to eligible owners and tenants in the following areas:

- Reimbursement of reasonable moving and related expenses;
- Replacement housing payments under certain conditions;
- Relocation assistance services to help locate replacement housing, farm, or business properties;
- Reimbursement of certain necessary and reasonable expenses incurred in selling real property to the government.

Cultural Resources

Refuge establishment and subsequent land acquisition generally will have no effect on archeological resources. Traditional cultural properties and sacred sites of concern to Indian tribes and other ethnic and cultural groups receive increased protection to the extent the FWS can obtain information about them. However, in some cases buildings and other structures may not receive increased attention under Service versus private ownership. The high cost of maintaining and preserving some buildings may prohibit acquisition or future use of some building sites. But overall, cultural resources receive increased protection from loss because of the several Federal laws that apply to property owned and administered by the Federal government.

The Service might affect some cultural resources when it develops refuge land for wildlife habitat, administrative facilities or public use areas.

The potential for refuge activities to affect prehistoric and historic resources, Native American human remains and cultural objects, and traditional and sacred sites will be determined early in project planning. The refuge manager, with the assistance of the Regional Historic Preservation Officer, will develop a program for conducting inventory surveys and attempt to obtain funding for those surveys. The requirements of the several cultural resources laws, executive orders, Federal regulations, policies and standards specified in the Fish and Wildlife Service Manual 614 FW 1-5 apply in all cases.

Archeological investigations and collecting are performed only in the public interest by qualified archeologists working under an Archaeological Resources Protection Act or Antiquities Act permit issued by the Regional Director. Refuge personnel take steps to prevent unauthorized collecting by the public, contractors, and refuge personnel. Violations are reported to the Regional Historic Preservation Officer.

Effects on Current Drainage Patterns

The Service would not cause any artificial increase of the natural level, width, or flow of waters without ensuring that the impact would be limited to lands in which the Service has acquired an appropriate real estate interest from a willing seller, e.g., fee title ownership, flowage easement or cooperative agreement. Thus, all alternatives would not have any impact on drainage from neighboring lands. If Service activities inadvertently created a water-related problem for any private landowner (flooding, soil saturation or deleterious increases in water table height, etc.), the problem would be corrected at the Service's expense.

Refuge Administration

Any acquired lands would become part of the National Wildlife Refuge System. In beginning stages a new refuge could be managed administratively as a satellite refuge by the Rydell NWR at Erskine. As the land base increases, the complexity of habitat management and administration increases, and the new refuge would probably be assigned its own funding, equipment, and staff. Speaking very generally, a fully staffed refuge of this size would have about seven staff members and an annual operating budget of approximately \$700,000. Please see Appendix A for more details about potential future refuge management.

Impact on Public Roads

The Service does not close roads without township and county approval. Generally, closures are sought only if a road is landlocked by Service property and is a dead end. The current road system would remain the same unless access requires modification sometime in the future. Coordination with state, county, and township officials and residents would be required for any road closure.

Public Recreational Use

The opportunity for wildlife-dependent public recreational use will increase under alternatives A and C. The Refuge Improvement Act of 1997 identifies six priority uses: hunting, fishing, wildlife observation, photography, environmental education, and interpretation as wildlife-dependent recreational activities. These uses are encouraged on refuges when they are compatible with the purposes of the refuge. A pre-acquisition Compatibility Determination has been included with Appendix A. This certificate states which of the six priority public uses currently occurs within the project area and which uses will be allowed until a Comprehensive Conservation Plan is prepared for the new refuge. Currently, we anticipate that all six priority uses will be allowed as soon as a sufficient land base is acquired for the refuge.

Public recreational use is permitted on nearly all national wildlife refuges. There are 46 national wildlife refuges in the Great Lakes-Big Rivers Region of the U.S. Fish and Wildlife Service, which includes Wisconsin, Minnesota, Iowa, Illinois, Indiana, Michigan, Ohio and Missouri.

Of these, 39 are open to various public uses. The seven that are not open include two caves with endangered species and five islands used by colonial nesting birds.

IV. Cumulative Impacts

The phrase “cumulative impacts” refers to the overall effect of the proposed action or a series of similar actions in a landscape or regional setting. Restoring natural wildlife habitat, as proposed in all three alternatives, is generally considered to have positive environmental consequences. Native prairie plant communities, waterfowl, and grassland bird populations will all benefit on a regional basis. The restoration of lost or degraded wetlands in particular will have an overall positive impact on the surrounding region and the human environment. For example, Alternatives A, B and C will all result in an increase in water retention in the upper watershed of several Red River drainages. Flood control benefits to downstream communities, and protection of the existing water supply for the city of Crookston, will result from the restored natural hydrology.

V. Environmental Justice

Executive Order 12898 “Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations” was signed by President Bill Clinton on February 11, 1994, to focus Federal attention on the environmental and human health conditions of minority and low-income populations with the goal of achieving environmental protection for all communities. The Order directed Federal agencies to develop environmental justice strategies to aid in identifying and addressing disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. The Order is also intended to promote nondiscrimination in Federal programs substantially affecting human health and the environment, and to provide minority and low-income communities access to public information and participation in matters relating to human health or the environment.

In 1997, U.S. Census Bureau figures showed that 14 percent of the population of Polk County lived below the poverty level. In 1990, the population of Polk County was 31,501. Slightly fewer than 1,000 people (3 percent) were reported as a racial minority.

The minority population is small in Polk County and the poverty rate is low. Based upon the U.S. Census Bureau figures, it is apparent that the proposed Refuge does not disproportionately place any adverse environmental, economic, social, or health impacts resulting from this proposal on minority and low-income populations.